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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
              Copyright
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using sw model - protein search, OM protein

Seconda ᅼ 2005, 16:08:55 February 16, Run on:

updates/sec % Search time 42.049
(without alignments)
2014.322 Million cell

21

US-10-003-356-2 1138 1 MFERRKEQDEGPGIHEFLAF.....RVIASDKIQSKAVVKRIQHF score: Perfect

Sequence:

Scoring table:

0.5 Gapext BLOSUM62 Gapop 10.0 ,

2105692 segs, 386760381 residues Searched:

of hits satisfying chosen parameters

Total number

2105692

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Geneseq 16Dec04:* Database

geneseqp1980s:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	e24048 Human	5997 Human	e24050 Chimer	24 Mouse ph	c12754 Human	193195 Fugu ext	i40967 Fugu cal	41016 Fugu ca	00508 Chicken	10927 Atlanti	10923 Atlanti	10925 Atlanti	0929	9105 Human C	15072 Human C	01 Human c	49126 Chimeri	15092 Chimeri	5000 Human c	47218 Chimeri	999 Human	32059 Dogfia	76004 Shark	78761 Dogfish	17 Sh
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ALIGNMENTS

Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy; Human V2 vomeronasal receptor (Zvn2R1) N-terminal protein. AAE24048 ID AAE24048 standard; protein; 219 AA (first entry) 04-OCT-2002 AAE24048; receptor. RESULT 1

Homo sapiens. Кеу

"Mature human Zvn2R1 N-terminal protein" Location/Qualifiers
1. .29
/label= Signal_peptide
30. .219
/note= "Mature human Zvr Peptide Protein

WO200242464-A2

30-MAY-2002

15-NOV-2001; 2001WO-US046034.

21-NOV-2000; 2000US-0252373P.

(ZYMO) ZYMOGENETICS INC.

Holloway JL; Lok S,

WPI; 2002-479953/51. N-PSDB; AAD39168.

Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for identifying presence of Zvn2R1 ligand in sample, as educational tools in laboratory practicum kits for courses related to genetics and molecular biology

Claim 1; Page 81; 98pp; English.

The invention relates to an isolated human V2 vomeronasal receptor termed Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of Zvn2R1 gene in a biological sample, to determine if a subject's chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies,

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identifying proteins by Western blotting, protein purification, determining the weight of expressed ZwnST1 polypeptides as ratio to total protein expressed, identifying peptide cleavage sites, coupling amino and carboxyl terminal tags, amino acid sequence analysis, controring biological activities of both the native and tagged protein in vivo and to teach analytical skills such as mass spectrometry, circular dichroism to determine conformation, espectrometry, circular dichroism to determine the three-controling and in a spectroscopy to reveal the structure of proteins in solution. ZwnZn1 is spectroscopy to reveal the structure of proteins in solution. ZwnZn1 is useful as educational tools in laboratory practicum kits for courses related to genetics and molecular biology, protein chemistry, antibody production and analysis, and as standards or as unknowns for testing purposes. The invention is useful as a teaching aid to instruct students how to prepare affinity chromatography columns to purify ZwnZn1, and for cloning and sequencing the polymucleotide that encodes an antibody and thus as a practicum for teaching a student how to design humanised antibodies. The invention is useful in gene therapy. The present sequence is human ZwnZn1 N-terminal protein
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CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
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Best Local Similarity
Matches 219; Conserva
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N-PSDB; ADC85996.
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gene therapy
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                                                                                 The invention relates to a novel polynucleotide encoding a guanosine triphosphate-binding protein coupled receptor (GPCR). A polynucleotide of the invention may have a use in gene therapy. The polynucleotide and polypeptide are useful for preparing a composition for treating a patient in need of increased or suppressed activity or expression of the guanosine triphosphate-binding protein coupled receptor. The protein sequences shown in ADC85549-ADC87617 represent GPCR's of the invention.
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/note= "Ligand binding domain"
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30-MAY-2002;

2001WO-US046034 15-NOV-2001;

2000US-0252373P 21-NOV-2000;

(ZYMO) ZYMOGENETICS INC.

Holloway JL; Lok S,

WPI; 2002-479953/51 N-PSDB; AAD39172.

ind molecular tools onal lovel isolated human V2 vomeronasal receptor, termed Zvn2Rl dentifying presence of Zvn2Rl ligand in sample, as educati aboratory practicum kits for courses related to genetics a biology Novel

Claim 5; Page 93-96; 98pp; English.

The invention relates to an isolated human V2 vomeronasal receptor termed Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of Zvn2R1. The Zvn2R1 gene in a biological sample, to determine if a subject's chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies, identifying proteins by Western blotting, protein purification, determining the weight of expressed ZvnZR1 polypeptides as a ratio to total protein expressed, identifying peptide cleavage sites, coupling amino and carboxyl terminal tags, anno acid sequence analysis.

C total protein expressed, identifying peptide cleavage sites, coupling amino and carboxyl terminal tags, and caid sequence analysis.

C total protein expressed zvnZR1 so both the native and tagged protein in vivo and to teach analytical skills such as mass spectrometry, circular dichroism to determine conformation, especially virte four alpha helices X-ray crystallography to determine the three-the four alpha helices X-ray crystallography to determine the three-spectroscopy to reveal the structure of proteins in solution. ZvnZR1 is useful as educational tools in laboratory practicum kits for courses related to genetics and molecular biology, protein chemistry, antibody production and analysis, and as standards or as unknowns for testing purposes. The invention is useful as a teaching aid to instruct students cloning and sequencing the polynuclecide that encodes an antibody and thus as a practicum for teaching a student how to design humanised antibodies. The invention is useful in gene therapy. The present sequence the community because a community busined by aligning human ZvnZR1 and murine tissue-type vomeronasal putative of pheromone receptor (VZR2). (Updated on 29-AUG-2003 to standardise OS termed sion of of ged protein in present sequence designed by putative struct students von2R1, and for antibody and

Sequence 927 AA;

The invention relates to an isolated human G protein-coupled receptor polypeptide and its encoding polynucleotide, including the full length

Disclosure; SEQ ID NO 84; 290pp; English

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                                                                    61 IDSRTIPANESILEPASAKCEGFNFORFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT
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Score 1138; DB 5;
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 100.0%;
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                                                                                                                                                                                                                                                                                                                 ADI41024 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                          Conservative
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           Local Similarity
Les 219; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (FEDE/) FEDER J N. (MINT/) MINTIER G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004018976-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus.
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                                                                                                                                                                                                                                                                                                                                             ADI41024;
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 Query Match
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              Best Loc
Matches
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proceding this protein region). The proteins are designated Hoppmulectic encoding this protein region). The proteins are designated Hoppmulacity proteins minuse the start methioning the present of the polymethal and Hoppmulacity. A Hoppmulacity of Hoppmulacity and Hoppmulacity and Hoppmulacity of Hoppmulacity of the presence of amutation in a subject condition or a succeptibility to a pathological condition in a subject comprising atermining the presence or absence of a mutation in the polymetide or the presence or absence of a mutation in the polymetide or the presence or absence of a mutation in the polymetide or the presence or absence of a mutation in the polymetide or the presence or absence or amount of expression of the polymetidical ample and diagnosing a pathological condition or a susceptibility to a pathological condition or a susceptibility to a pathological condition is subject to preventing treating or amblioration coupled receptor at the presence or absence of the mutation, or the presence or absence of the protein coupled receptor and for preventing treating or ambliorating a medical condition, such a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder, spermacogenesis, infertility, Klinefelter's sperm transport of disorder, spermacogenesis, infertility, Klinefelter's spermature puberty, warricocle, immortle cilia syndrome, viral orchitis, sperm transport disorder, a proliferative immune disorder, cubication and protein activity is a proliferative immune disorder, leukaemia, arthritis, granulomatous disease such as hoter-versus-graft and graft-versus-host diseases, colectoderma, recell mediated specifical pulmonatous disorders, successiv (treating or ind to a mammalian dical condition, such as receptor activity, a a reproductive disorder

Sequence 912 AA;

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7
                                                                                        17 FLAFLWAELGSEAKEEKEERTCRLLGK-----CVDAENHSLVIGGLFPIDSRTIPANES
                                                                           ILEPASAKCEGFNFORFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAV
                                                                                                                             LVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVILSD
                      Gaps
                     8;
   Length 912;
                      Indels
Score 740; DB 8; I
Pred. No. 4.9e-76;
5; Mismatches 30;
                                                                                                                                                          219
                                                                                                                                                        KYOFPSYLRVIASDKIOSKAVVKRIOHF
                                                                                                                                                                   25;
 65.0%;
larity 69.7%;
Conservative 2
Query Match
Best Local Similarity
                   145;
                                                                                                                                                        192
                                                          12
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                   Matches
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ADC12754 standard; protein; 720 AA ADC12754; ADC12754 ID ADC1 XX AC ADC1 RESULT 5

entry) (first

SEQ ID No 86. Human GPCR protein, G protein-coupled receptor; GPCR; antibacterial; fungicide; protozoacide; virucide; antirheumatic; antiarthritic; tranquiliser; antidiabetic; osteopathic; nootropic; neuroprotective; anorectic; cardiant; neuroleptic; cytostatic; antiparkinsonian; hypotensive; hypertensive; antiallergic; anticonvulsant; analgesic; infection; rheumatoid arthritis; chronic obstructive pulmonary disease; COPD; asthma; non-insulin dependent diabetes; obesity; osteoporosis; Alzheimer's disease; age-related macular degeneration; myocardial infarction; schizophrenia; osteoarthritis; cancer; myocardial infarction; schizophrenia; osteoarthritis; cancer; parkinson's disease; congestive heart failure; hypotension; hypertension; ulcer; allergy; benign prostatic hyperplasia; selzure disorder; anxiety; obsessive compulsive disorder; Cushing's syndrome; hypopituitarism; pain; human

Homo sapiens

WO2003000893-A2

03-JAN-2003

24-JUN-2002;

26-JUN-2001; 2001US-0301095P 06-NOV-2001; 2001US-0333185P

(DECO-) DECODE GENETICS

EHF.

Sigurdsson GT; Martinez RMA,

WPI; 2003-210155/20 N-PSDB; ADC12753.

New G protein-coupled receptor (GPCR) genes and polypeptides, useful for diagnosing diseases associated with a GPCR, or in gene therapy for treating e.g. obesity, osteoporosis, Alzheimer's, cancers or congestive congestive treating e.g. heart failure.

Claim 10; SEQ ID NO 86; 253pp; English

The invention relates to a novel isolated nucleic acid of a G proteincoupled receptor (GPCR) gene comprising any of 62 sequences of 912-2454

by, or its complements; a GPCR polypeptide comprising any of 62 sequences of 291-818 amino acids; or a nucleic acid that hybridises, under high of 291-818 amino acids; or a nucleic acid that hybridises, under high stringency conditions, with any of the 62 GPCR sequences or any of their complements. The GPCR agents of the invention have the following activities: antibacterial, fungalcide, proteozoacide, virucide, antiparkinsonian, hypotensive, antialabetic, osteopathic, antiparkinsonian, hypotensive, hypertensive, antiulcer, anticlerial condition associated with a GPCR in an individual. The nucleic acid or a down nucleic acid, or for diagnosing a susceptibility to a disease or conditions associated with a GPCR. These diseases include infections (e.g. bacterial, fungal, proteozoan or viral), theumatoid arthritis, conditions associated with a GPCR. These diseases include infections of formic obstructive pulmonary diseases (COPD), asthma, non-insulin chronic obstructive pulmonary diseases (COPD), asthma, non-insulin osteoarthritis, cancers, Parkinson's diseases, congestive heart failure, hypotension, hypotension, uncertain, mycoardial infarction, schizophrenia, osteoarthritis, osteoprossis, allacides, congestive diseases to hypotensian, subscribers, anxiety, obsessive compulsive disorder, hypoteliaria, selzure disorder, anxiety, obsessive compulsive disorder, hypotension, nymention.

720 AA; Sequence S

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                                                            142
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                                                                                          86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ed receptor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              asthma;
                                                                                                                     FNFORFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVFLTGQEENR
                                                                                       FNFORFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVFLTGQEENR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypertensive;
                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                             anti-HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated human G-protein coupled recept HGPRBMY30 polypeptide or a sequence having 95% identity to the above mentioned sequences. (I) is useful for preventing or treating a mecondition, selected from an immune disorder; a cardiovascular disoran inflammatory disorder in which G-protein coupled receptors are edirectly, or indirectly, associated with the disorder; a metabolic disorder; a reproductive disorder; a male reproductive disorder; testicular cancer; a neural disorder; an endocrine disorder; gastrointestinal disorder; (I) and (II) are also useful for detecting
                                                                                                                                                                                                                                                                                                                                                                                                      immunosuppressive; cardiant; antiinflammatory; cytostatic; anti-Fantirheumatic; antiarthritic; antibacterial; antiseborrheic; dermatological; antipsoriatic; neuroprotective; nootropic; antiparkinsonian; antidiabetic; ophthalmological; antiasthmatic; antidepressant; neuroleptic; hypotensive; tranquillizer; hypertens anorectic; metabolic; virucide; osteopathic; antianginal; vulneragene therapy; G-protein coupled receptor protein; HGPRBMY30; immune disorder; cardiovascular disorder; inflammatory disorder; metabolic disorder; reproductive disorder; testicular cancer; neural disorder; endocrine disorder; gastrointestinal disorder; Alzheimer's disease; Parkinson's diseases; diabetes; dwarfism; asschizophrenia; obesity; anorexia; osteoporosis; angina pectoris;
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 Length 720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel human G-protein coupled receptor, HGPRBMY30 polypepti
preventing and treating e.g. immune disorders, cardiovascul
or inflammatory disorders.
                                Indels
DB 7; I
2.4e-72;
                                .;
0
                                Mismatches
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 Score
Pred.
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62.1%;
100.0%;
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                                                                                                                                                                                 ASDKIQSKAVVKRIQHF
                                                                                                                                                                                                ASDKIQSKAVVKRIQHF
                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           myocardial infarction.
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                                                                                                                                                                                                                                                                                                                                                                               extracellular
               Similarity
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                             137;
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                                                                                         27
                                                                                                                                                   87
                                                                                                                      143
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               Local
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                             Matches
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prognosing, preventing, treating, and/or ameliorating the diseases such as hematopoietic and pulmonary disorders, Alzheimer's, Parkinson's diseases, diabetes, dwarfism, color blindness, retinal pigmentosa, casthma, expression, schizophrenia, sleeplessness, hypertension, anxiety, stress, renal failure, acute heart failure, hypotension, obesity, anorexia, HIV infections, osteoporosis, angina pectoris, and myocardial infarction. (I) and (II) are useful for modulating signal transduction activity. (I) and (II) are useful for modulating signal transduction activity. (I) and (II) are useful for modulate activities of (I). (I) and (II) also useful to modulate mammalian characteristics, such as body height, weight, hair color, eye color, skin, percentage of adipose tissue, pigmentation, size and shape, to change a mammal's mental state or physical state by influencing biorhythms, caricadic rhythms, depression, tendency for violence, tolerance for pain, reproductive capabilities, hormonal or endocrine levels, appetite, libido, memory, stress, or other cognitive qualities. This sequence corresponds a protein having similarity to the novel HGPRBMY30 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Receptor; GPCR; G protein-coupled receptor; reproductive disorder; testicular disorder; vas deferens disorder; sperm transport disorder; XX male; epididymitis; cryptorchidism; sperm transport disorder; testicular cancer; testicular germ cell tumour; male hormone disorder; premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder; leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis; inmune disorder; inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity; graft-versus-host disease; autoimmunity disorder; spectotoxicity; systemic lupus erythematosus; drug induced haemolytic anaemia; sjogren's disease; T-cell maturation disorder; stroke; ischaemia; myocardial infarction; atherosclerosis; gastrointestinal disorder; ulcer; pulmonary disorder; brain disorder; endocrine disorder; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TLGYO! FDTCFTISKSVEAVLVFLTGQE - - - ENRPNFRNSTGAFPA - - GIVGAGGSFLSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI :::|||||| ::||||| ::||||| ::|||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                31.8%; Score 362; DB 7;
42.8%; Pred. No. 4.2e-32;
ive 37; Mismatches 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADI40967 standard; protein; 940 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 74; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Takifugu rubripes.
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                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 940 AA;
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2002US-0380336P

14-MAY-2002;

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(FEDE/) FEDER

2003US-00436715

13-MAY-2003;

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Ŋ O RAMANATHAN (MINT/) MINTIER (RAMA/)

Ramanathan CS; ບັ Mintier Ŕ Feder

WPI; 2004-122081/12

a medical leotide, and polynuc G-protein coupled receptor polypeptide and polynuc diagnosing, preventing, treating or ameliorating e.g. reproductive disorder, immunodeficiency dise cancer. useful for condition, testicular useful

SEQ ID NO 27; 290pp; English Disclosure;

Comprises minuse the start methionine (and the region of the polymucleoride incoding this protein region). The proteins are designated HGPRBMY30-1, HGPRBMY30-3, HGPRBMY30-3, HGPRBMY31-1, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY30-1, HGPRBMY42, HGPRBMY42, HGPRBMY42-1, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY42, polynucleotide HGPRBMY30-1, brain disolucia, ney cancer or its d receptor full length disorders are resent sequence invention. purify, The irritable bowel syndrome, ulcers, pulmonary disorders, brain diendocrine disorders, or ovarian, stomach, colon or kidney cance related proliferative condition (many other diseases and disord listed in the specification). The antibodies may be used to pur detect and target the G-protein coupled receptor polypeptides. polynucleotides are also useful in gene therapy. The present se represents a species homologue of a novel GPCR of the invention The invention relates to an isolated human G protein-coupled polypeptide and its encoding polynucleotide, including the fiproteins minus the start methionine (and the region of the part

940 AA; Sequence

ω •• Gaps . 9 Length 940; 56; 31.8%; Score 362; DB 8; larity 42.8%; Pred. No. 4.2e-32; Conservative 37; Mismatches 56 Similarity 74; Conser Query Match Best Local Best Loc Matches

92 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFORFRWMKAMIHMIKEINKRKDILPNI

TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIV

112

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166

GAGGSFLSV

TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPATIAVVGAAGSAVST 93 167

SANILISLEYIPQISYASSSRLLSNKNQYKSFMRTIPTDEHQATAMADVIEYF a a ð

ADI4101 RESULT

ADI41016 standard; protein; 940 AA

ADI41016;

entry) (first 22-APR-2004

Fugu calcium sensing receptor #2.

KW Receptor; GPCR; G protein-coupled receptor; reproductive disorder; testicular disorder; vas deferens disorder; spermatogenesis; infertility; XX male; epididymitis; cryptorchidism; sperm transport disorder; testicular germ cell tumour; male hormone disorder; testicular germ cell tumour; male hormone disorder; W premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder; W leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis; will inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity; W graft-versus-host disease; autoimmunity disorder; systemic lupus erythematosus; drug induced haemolytic anaemia; Sigrem's disease; T-cell maturation disorder; vascular disorder; stroke; ischaemia; W pulmonary disorder; brain disorder; endocrine disorder; cancer; W gene therapy.

Takifugu rubripes

US2004018976-A1.

29-JAN-2004

2003US-00436715 13-MAY-2003;

2002US-0380336P 14-MAY-2002;

ς Ω (FEDE/) FEDER J N. (MINT/) MINTIER G. (RAMA/) RAMANATHAN C

Ramanathan CS; ϋ Š, Feder

WPI; 2004-122081/12.

New human G-protein coupled receptor polypeptide and polynucleotide, useful for diagnosing, preventing, treating or ameliorating a medical condition, e.g. reproductive disorder, immunodeficiency disease or testicular cancer.

Disclosure, SEQ ID NO 76; 290pp; English.

The invention relates to an isolated human G protein-coupled receptor
polypeptide and its encoding polynucleotide, including the full length
proteins minus the start methionine (and the region of the polynucleotide
proteins minus the start methionine (and the region of the polynucleotide
encoding this protein region). The proteins are designated HGPRBMY30-1,
HGPRBMY30-2, HGPRBMY42-1, HGPRBMY41-2, HGPRBMY41-3,
HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
expression vectors, host cells, antibodies, preventing (treating or
ameliorating) a medical condition comprising administering to a mammalian
subject the polypeptide or its modulator and diagnosing a pathological
condition or a susceptibility to a pathological condition in the
polymetide in a biological sample and diagnosing a pathological
condition or a susceptibility to a pathological condition based on the
presence or absence of the mutation, or the presence or amount of
presence or absence of the mutation, or the presence or amount of
presence or absence of the mutation, or the presence or amount of coupled receptor The human G-protein of the polypeptide). expression

.rag

P.1

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Condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant G-protein coupled receptor activity, a clistoder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant G-protein coupled receptor activity, a disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male, epiddymitis, genital warts, germinal cell aplasia, cryptorofidism, varicocele, immotile cilia syndrome, viral orchitis, sperm transport disorders, testicular garm cell tumours, male hormone disorders, premature puberty, incomplete puberty, Kallman syndrome, Cubhing's syndrome, an immune disorder, a proliferative immune disorder, leukaemia, arthritis, asthma, incomplete puberty diseases such as AIDS, rheumatoid arthritis, asthma, immunodeficiency diseases such as AIDS, rheumatoid arthritis, such as T-cell metrophilia, psoriasis, hypersensitivities, such as T-cell metropenia, nutrophilia, psoriasis, hypersensitivities, such as T-cell metropenia, undercophilia, psoriasis, hypersensitivities, such as tautoimmunity disorders, such as autoimmune infertility, demyelination, systemic lupus erythematosus, druke, ischaemia, myocardial infarction, disorders, vascular disorders, stroke, ischaemia, myocardial infarction, atherosclerosis, embolisms, thrombosis, gastrointestinal disorders, cancer or its calcated proliferative condition (many other diseases and disorders are listed in the specification). The antibodies may be used to purify, detect and target the G-protein coupled receptor polypeptides are also useful in gene therapy. The present sequence conticion was an envised brown or an analyse of the invention.
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    pathological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IVGAGGSFLSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polynucleotides are also useful in gene therapy. The present sequence represents a species homologue of a novel GPCR of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INKRKDILPNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INNSSSLLPNI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bxtracellular domain
"Amino-terminal predominantly hydrophilic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Avian; chicken; calcium-sensing receptor; CaR; clone ClD; extracellular calcium homeostasis; parathyroid hormone; PTH; serum calcium regulator; bone deposition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53 LVIGGLPPIDSRTIPANESI-LEPASAKCEGFNPQRFRWMKAMIHMIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ILLGGLFPIHFGISSKDENLAARPESTKCVRFNFRGFRWLQAMVFAIEE
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  can be used for diagnosing a
to a pathological condition
or ameliorating a medical con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56;
56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31.8%; Score 362; DB 8; 42.8%; Pred. No. 4.2e-32; ive 37; Mismatches 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= Signal_peptide
20. .1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU00508 standard; protein; 1059 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chicken calcium-sensitive receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37;
or polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .611
/label=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 940 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU00508;
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Best Local (
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AAU00508
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The present sequence representing an avian (chicken) calcium-sensing receptor (CaR) is isolated from chicken parathyroid gland cDNA clone CID.

CaR is involved in regulating extracellular calcium homeostasis by controlling PTH (parathyroid hormone) secretion. The polynucleotide encoding CaR is useful for producing calcium-sensing receptor protein, which can be used to regulate extracellular calcium homeostasis and to regulate serum calcium levels in chickens and related species. By increasing serum calcium, more rapid growth is obtained due to an increased rate of bone deposition, and eggs of higher quality are produced. A DNA construct comprising the CaR polynucleotide is useful for developing transgenic animals expressing a mutated form of the calcium-sensing receptor. The CaR polypeptide can be used to produce antibodies to CaR, which can be used to detect the presence of CaR protein using immunoassays. Also described are methods and compositions which can be immunoassays. Such an expression of calcium in humans and animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                transmembrane
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CID.
                             /note= "Hydrophobic region characteristic of calcium-gensing receptors and metabotropic glutamate receptors"
                                                                                                                                                                                                                                                                                                                                                                                                                      New avian calcium-sensing receptor polynucleotide and encoded receptor protein, useful for regulating serum concentration of calcium animals, particularly in chickens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18 LAFLW--AELGSEAKEEKEERTCRLLGKCVDAENHSLVIGGLFPIDSRTIPANESI-LE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PASAKCEGFNFORFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----ILLGGLFPIHFGVAAKDQDLKSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watch 31.4%; Score 357; DB 4; Length 1059; Local Similarity 37.6%; Pred. No. 1.9e-31; Loss 79; Conservative 43; Mismatches 64; Indels 2
                                                                                                                                "Carboxy-terminal hydrophilic domain"
                                                                                comprising helical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
/label= Mature_CaR_protein
                                                                                 core
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                                                                                                                                                                                                                                                                                                   (BGHM ) BRIGHAM & WOMENS HOSPITAL INC.
                                                                                                                                                                                                                                                                                                                                    Quinn SJ;
                                                                               /note= "Hydrophobic domains"
            136. .165
/note= "Hydrophobic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1, Fig 2A-2D; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 LLFTWNTAAYGPNQRAQKKGD-
                                                                                                                                                                                                                                                                    97US-0058095P.
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                                                                                                     /note= "C
                                                                                                                                                                                                                                                                                                                                    Bai M,
                                                                 612. .861
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N-PSDB; AAS01709.
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                                                                                                                                                                 US6210964-B1.
                                                                                                                                                                                                                                                                   18-AUG-1997;
                                                                                                                                                                                                                                    14-AUG-1998;
                                                                                                                                                                                                 03-APR-2001
                                                                                                                                                                                                                                                                                                                                  Brown EM,
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                Region
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ADH10927 standard; protein; 850 AA

RESULT 10 ADH10927

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                                                                                                                                                                                                                                                                                                                                                                                                                                                     111
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                                                                                                                                                                                                                                                                          restoration of
from freshwater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGSFLSV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein #1.
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                                                                                                                                                                                                                                                                  PVCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TLGYQIFDICFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIV
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 850;
                                                              PVCR; Atlantic salmon;
                                             (PVCR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cation sensing receptor (PVCR)
                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                              New Atlantic salmon polyvalent cation-sensing receptor, polypeptides useful in commercial raising of salmon and wild Atlantic salmon populations especially in transfer
                                           Atlantic salmon polyvalent cation sensing receptor
                                                                                                                                                                                                                                                                                                                                                                                                                            11;
57;
                                                                                                                                                                                                                                                                                                                                                                                                                Score 354; DB 7;
Pred. No. 3.1e-31,
8; Mismatches 5
                                                                                                                                                                                                                                                                                                           Claim 6; SEQ ID NO 12; 269pp; English
                                                             mortality reduction
                                                                                                                                                                                                                      Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   941
                                                                                                                                                                                                                                                                                                                                                                                                                                38;
                                                                                                                                                         2002US-00121441.
2002US-00125772.
2002US-00125778.
2002US-00125792.
                                                                                                                                                                                                                      Betka
                                                                                                                                         2003WO-US011188
                                                                                                                                                                                                                                                                                                                                                                                                                 31.1%;
41.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; protein;
                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Atlantic salmon polyvalent
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                      Nearing
                                                                                                                                                                                                    (MARI-) MARICAL INC
                                                                                                                                                                                                                                      WPI; 2003-845319/78
N-PSDB; ADH10926.
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                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
nes 72; Conser
                                                             cation
                                                                     growth increase;
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 850 AA;
                                                                                                      WO2003087331-A2
                                                                                                                                                         11-APR-2002;
18-APR-2002;
18-APR-2002;
18-APR-2002;
                                                                                                                                        09-APR-2003;
                                                                                                                                                                                                                                                                                          to seawater.
                          11-MAR-2004
                                                                                                                        23-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-MAR-2004
                                                            polyvalent
                                                                                                                                                                                                                     Harris HW,
         ADH10927;
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Best Local S
Matches 72
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                                                                                     Salmo
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of polyvalent
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                                                                                                                                                                                                                                                                                                                                                                                                                                         restoration of from freshwater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPSTIAVVGASGSAVST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI
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ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGFRWLQAMIFAIEEINNSSTLLPNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                           PVCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 941;
      salmon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               salmon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    New Atlantic salmon polyvalent cation-sensing receptor, polypeptides useful in commercial raising of salmon and wild Atlantic salmon populations especially in transfer
    .ent cation sensing receptor; PVCR; Atlantic increase; mortality reduction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            receptor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31.1%; Score 354; DB 7;
larity 41.6%; Pred. No. 3.6e-31
Conservative 38; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cation sensing
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2002US-00125772.
2002US-00125778.
2002US-00125798.
                                                                                                                                                                                                                                                                                                                                 Betka
                                                                                                                                                                  2003WO-US011188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
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Best Local Similarity
                                                                                                                                                                                                                                                                                            (MARI-) MARICAL INC
                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-845319/78
N-PSDB; ADH10922.
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                                                                                           WO2003087331-A2
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18-APR-2002;
18-APR-2002;
18-APR-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEO
                                                                                                                                                               09-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seawater.
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                                                         galar
polyvalent
growth incr
                                                                                                                               23-OCT-2003
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11-APR-2002;
18-APR-2002;
18-APR-2002;
18-APR-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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                                                                                                                             to seawater.
                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JAN-2000
                                                         Harris HW,
                                                                                                                                                                                                                                                                                                                                                                                                                               AAY49105;
                                                                                                                                                                                                                                 Sequence
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Best Local
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                                                                                                                                                                                                              The invention comprises the amino acid and coding sequences of polyvalent cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and protein sequences of the invention are useful in the commercial raising of Atlantic salmon and the restoration of wild Atlantic salmon populations, especially in the transfer from freshwater to seawater with increased growth and reduced mortality. The present amino acid sequence represents an Atlantic salmon PVCR protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                      166
                                                                                                                                                                                                                                                                                                                                                                                      151
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                                                                                                                                                             storation of ome freshwater
                                                                                                                                                                                                                                                                                                                                                                             TLGYQIFDICFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV
                                                                                                                                                                                                                                                                                                                                    NKRKDILPNI
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|NNSSTLLPNI
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from
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                                                                                                                                                                                                                                                                                                                                                                                                               Length 941;
                                                                                                                                                                                                                                                                                                                                              salmon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cation sensing receptor (PVCR)
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                   New Atlantic salmon polyvalent cation-sensing receptor, polypeptides useful in commercial raising of salmon and wild Atlantic salmon populations especially in transfer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyvalent cation sensing receptor; PVCR; Atlantic growth increase; mortality reduction.
                                                                                                                                                                                                                                                                                                                   57;
                                                                                                                                                                                                                                                                                                 31.1%; Score 354; DB 7;
41.6%; Pred. No. 3.6e-31;
tive 38; Mismatches 57;
                                                                                                                                                                                               269pp; English.
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                                                                                                           Betka
                                                 2002US-00121441.
2002US-00125772.
2002US-00125778.
2002US-00125798.
                                  2003WO-US011188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                ID NO 10;
                                                                                                          ۵,
                                                                                                          Nearing
                                                                                           (MARI-) MARICAL INC
                                                                                                                            2003-845319/78
                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                   N-PSDB; ADH10924
                                                                                                                                                                                                                                                                                   Sequence 941 AA;
WO2003087331-A2
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                                                 11-APR-2002;
18-APR-2002;
18-APR-2002;
18-APR-2002;
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                                 09-APR-2003;
                                                                                                                                                                               to seawater.
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                 23-OCT-2003
                                                                                                                                                                                                                                                                                                                72;
                                                                                                         Harris HW,
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The invention comprises the amino acid and coding sequences of polyvalent cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and protein sequences of the invention are useful in the commercial raising of Atlantic salmon and the restoration of wild Atlantic salmon populations, especially in the transfer from freshwater to seawater with increased growth and reduced mortality. The present amino acid sequence represents an Atlantic salmon PVCR protein of the invention.
                                                                                                                                                                                                                                                                                                                                                   restoration of from freshwater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TLGYRIFDICNIVSKALEATLSFVAQNKIDSLNLDBFCNCTDHIPSTIAVVGASGSAVST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219
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                                                                                                                                                                                                                                                                                                                    New Atlantic salmon polyvalent cation-sensing receptor, polypeptides useful in commercial raising of salmon and wild Atlantic salmon populations especially in transfer
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larity 41.6%; Pred. No. 3.6e-31;
Conservative 38; Mismatches 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 6; SEQ ID NO 14; 269pp; English
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                                                                                                                                                                                         Betka
2002US-00121441.
2002US-00125772.
2002US-00125778.
2002US-00125792.
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                                                                                                                                                                                      Nearing
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                                                                                                                                     INC
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B; ADH10928.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cognitive disorder
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                                                                                                                                    (MARI-) MARICAL
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The invention relates to G-protein fusion receptors (I) comprising: (1) in the N to C direction, extracellular (ECD), transmembrane (TMD) and intracellular (ICD) domains, each chosen independently from a CaR (Calcium receptor), GluR (metabotropic glutamate receptor) and GABABR (Gama-aminobutyric acid receptor); (2) an optional linker attached to the C-terminus of ICD; and (3) a G-protein (GP) linked to ICD or the Component, are used to assess function of the various domains and to incomponent, are used to assess function of the various domains and to dentify compounds (e.g. allosteric modulators or antagonists) that act on these domains. The modulators are potentially useful for treating or preventing diseases associated with the receptors, e.g. stroke, head or spinal cord injury, epilepsy, ischaemia, hypoglycaemia, anoxia, albeimer's disease, hyperparathyroidism, osteoporosis, cognitive disorders and depression. Nucleic acid (II) that encodes (I) is used: (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for recombinant production of corresponding proteins; and (2) to produce cells used in screening for modulators. Use of CaR and mGluR domains allows presentation of GABABR domains, to a binding agent, in a form more like the natural domain structure compared with use of incomplete receptors, lacking one or more domains. By shuffling different domains, agents can be identified that affect particular domains of a receptor
                                                                                                                                  New G-protein fusion receptors and chimeras containing domains from
different receptors, used to screen for modulators, potentially useful
e.g. for treating or preventing stroke or Alzheimer's disease.
                                        り
団
                                        Garrett
                                       JG,
                                      Busby
                                    Storjohann LL,
                                                                                                                                                                                                     Claim 13; Fig 1; 255pp; English
                                  Hammerland LG,
 PHARM INC
                                                                                   WPI; 1999-610995/52
N-PSDB; AAZ31049.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 612 AA;
                                 Stormann TM,
 (NPSP-) NPS
                                                  Simin RT;
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PANESI-LE :::||||||| ----IllgglfPIHFGVAAKDQDLKSR SAGNKIDSLNLDEFCNCSEHIPSTIAVVGATGSGVSTAVANLLGLFYIPQVSYASSSRLL LTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRIJGLYYLPQVGYTSTCVIJ KSVEAVLVF Gaps 24; 18 LAFLW--AELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFPIDSRTI PASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTIS Length 612; 31.0%; Score 353; DB 2; I 37.1%; Pred. No. 2.5e-31; tive 44; Mismatches 64; 219 SDKYOFPSYLRVIASDKIQSKAVVKRIQHF |:| || |:|| | :|| SNKNQFKSFLRTIPNDEHQATAMADIIEYF | | | | : : | : | : | 11 LALTWHTSAYGPDQRAQKKGD----Conservative Similarity 78; 75 135 190 Query Match Best Local 115 175 Matches a d d ð 8 ð à ద

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Human; G-protein fusion receptor; extracellular domain;
transmembrane domain; intracellular domain; CaR; mGluR;
                         612
                                                                                            Human CaR extracellular domain.
                      AAO15072 standard; protein;
                                                                       entry)
                                                                                                                            transmembrane domain; int modulator identification.
                                                                     (first
                                                                     22-AUG-2002
                                              AA015072;
RESULT 15
             AA015072
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GABABR;

Homo sapiens

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The invention comprises G-protein fusion receptors - comprising extracellular, transmembrane and intracellular domains similar to CaR, mGluR or GABAB receptor sequences. The G-protein fusion receptors of the invention may also possess a linker joined to the carboxy terminus of the intracellular domain, and a G-protein joined to the linker. The G-protein fusion receptors of the invention are useful for identifying modulators of CaR, mGluR and GABABR for use in treating associated conditions. The present amino acid sequence was used in the production of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modulators of intracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18 LAFLW--AELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFPIDSRTIPANESI-LE
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-ILLGGLFPIHFGVAAKDQDLKSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             useful for identifying m
G-protein joined to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                     Busby JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64;
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Pred. No. 2.5e-31,
44; Mismatches 64
                                                                                                                                                                                                                                                                                                                                                                Storjohann LL,
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